

V190

Power Supply

OPERATORS MANUAL

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MIDAS Verona Power Supply Operators Manual
DOC02-V190 Issue 1.0 - February 2004
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In line with the company's policy of continual improvement, specifications and function may be
subject to change without notice. This Operators Manual was correct at the time of writing. E&OE.



Important Safety Instructions



These symbols are internationally accepted symbols that warn of potential hazards with electrical products.



The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any of the ventilation openings. Install in accordance with the manufacturers instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments / accessories specified by the manufacturer.
12.  Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified personnel. Servicing is required when the apparatus is damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



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DECLARATION OF CONFORMITY

We, **Klark Teknik Group (UK) Plc**

of, Klark Teknik Building, Walter Nash Road, Kidderminster, Worcestershire, DY11 7HJ.

Declare that a sample of the following product:-

Product Type Number	Product Description	Nominal Voltage (s)	Current	Freq
V190	External Linear Power Supply	100V AC, 120V AC 220V AC, 240V AC	4.3A, 3.7A 2.1A, 1.95A	50/60Hz

to which this declaration refers, is in conformity with the following directives and/or standards:-

Directive(s)	Test Standard(s)
<i>Generic Standard using EN55103 Limits and Methods</i>	
<i>Class B Conduct Emissions</i>	<i>EN55103</i>
<i>Class B Radiated Emissions</i>	<i>EN55103</i>
<i>Fast Transient Bursts</i>	<i>EN61000-4-4</i>
<i>Static Discharge</i>	<i>EN61000-4-2</i>
<i>Electrical Safety</i>	<i>EN60065:2002</i>
	<i>UL60065-03 Pending</i>
	<i>CAN/CSA60065-03 Pending</i>
	<i>IEC60065-2001 Pending</i>

Signed: Simon Harrison
Name: Simon Harrison

Date: 27th February, 2004

Authority: Research and Development Director, Klark Teknik Group (UK) PLC

Attention!

Where applicable, the attention of the specifier, purchaser, installer or user is drawn to special limitations of use which must be observed when these products are taken into service to maintain compliance with the above directives. Details of these special measures and limitations to use are available on request and are available in product manuals.

The V190 external power supply has been developed to be used solely with the Midas Verona Series of audio mixing consoles.

All backed up by the standard Midas Three Year Warranty.

Please take the time to complete and return the registration card and, to obtain the best results with a minimum of effort, also read this operators manual.

Contents

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Installation and Service

The V190 series power supply unit is a two unit nineteen inch (2U 19") rack mounted power supply for use with the Midas Verona series of consoles only.

Installation

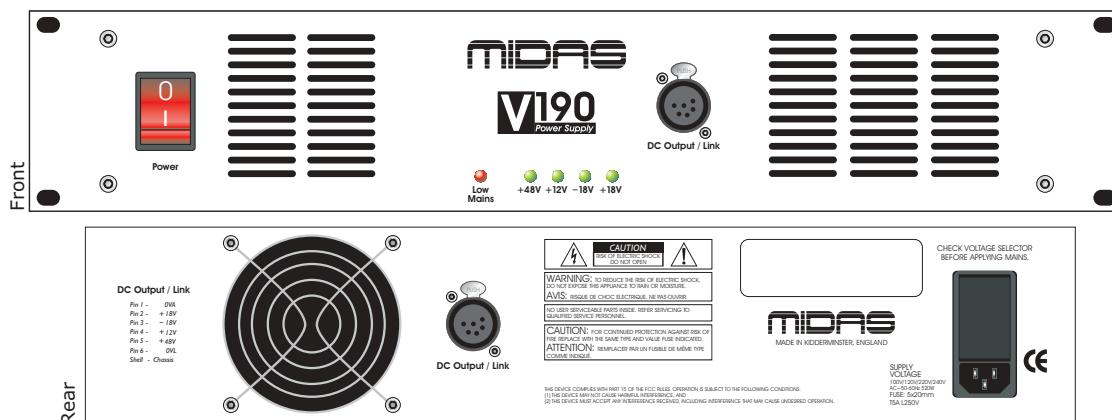
Before installing the power supply, please ensure that the correct mains supply voltage is selected on the rear of the supply. The mains inlet is provided via a single IEC type socket. A mains cables is supplied with the unit. Never, under any circumstances, should the power supply be operated without its safety earth connection.

The V190 series power supply should be installed into a 19" rackmount enclosure. If the power supplies are not in a permanent installation, the rackmount enclosure construction should take into account the weight of the supply to prevent damage to either the power supply or enclosure while in transit.

Air Flow

The V190 power supply has a forced air cooling channel flowing from back to front. To maintain adequate ventilation to the unit, the cooling channel must not be blocked or hindered and one unit (1U) should be left free between the top of the power supply and any other equipment or the rack. The rackmount enclosure should allow adequate airflow to both the front and back panels of the power supply.

If using a number of power supplies, one unit (1U) space should be left free above each supply.



Interference

Some interference may be noticed when the power supply is situated in close proximity to the Verona console. Moving the power supply away from the console will rectify this problem.

Service

The power supply may only be serviced by authorised personnel. Refer all servicing to a qualified, approved Midas service agent.

Depending upon where the power supply is installed, the interior of the unit will become, over time, dirty and will require cleaning.

The power supply should also be serviced if it is dropped, exposed to rain or moisture, liquid has been spilled into the supply or if the unit ceases to function normally.

DO NOT REMOVE THE COVER

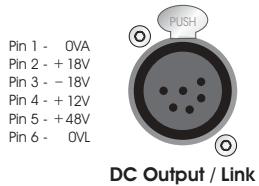
The inside of the power supply contains potentially lethal voltages and is capable of providing high currents. To reduce the possibility of electric shock, do not open the cover to the power supply. High voltages are still present in the supply, even when isolated from the mains.

Connection and Operation

Connection

Before powering up the V190 power supply, connect either the front or rear power supply output to the power inlet socket on the console.

The V190 power supply provides:



+12 volts
±18 volts
+ 48 volts

The power supply should only be connected to the console using the provided power connection cable. If, for any reason, the power connection cable should become damaged, the cable should be serviced by an authorised Midas service agent immediately or a Midas authorised replacement sought.

WARNING: The V190 power supply is capable of providing high currents. A short-circuit on any of the voltage supply pins of the power supply or connector will cause a high current to flow from the supply which could lead to damage both to the supply and to connected equipment and also a risk of fire and severe burns to persons.

The V190 power supply should be connected to the mains with the supplied IEC mains leads.



The V190 is a Linear power supply capable of operation where the nominal mains voltage is 100, 120, 220 or 240 VAC (50-60Hz). The correct mains supply voltage must be selected before applying mains power to the unit.

To change the mains operation voltage, disconnect from the mains. Open the compartment above the mains inlet connector with a flat bladed screw driver. Once open, you will see a drum with an operating voltages printed on each face. Remove the drum, then turn the drum to the required voltage and return it to the holder. Press firmly and then close the compartment. Make sure that the correct voltage now appears in the window of the compartment.

NOTE: The Midas V190 power supply MUST be earthed. The power supply should NEVER be used with the earth connection removed. The mains inlet socket earth connection is a safety connection and should be connected to the mains earth through the earth conductor in the provided mains lead.

WARNING: To prevent the risk of fire, fuses should always be replaced with fuses of the same rating and type.

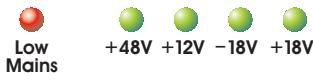
Operation

After connecting the V190 power supply to the console, switch on the power supply using the rocker switches on the front panel. Power will be applied to the console.

The user may monitor the activity of each of the voltage rails using the LEDs on the front panel. Each LED will light to show the rail is active. In addition, a Low Mains indicator is provided to alert the user to a mains undervoltage condition.



Where multiple supplies are present, these should be switched on at the same time so that excessive load is not applied to any single supply. Power supply linking information is shown on the next page.



WARNING: HOT

The internal operating temperature of the power supply could be sufficient to cause burns to persons. Do not open the cover or attempt to remove or bypass the safety covers protecting the fan and cooling channel.

Using Multiple Power Supplies

Using Multiple Power Supplies

The number of power supplies shipped as standard with the Verona varies with the frame size as follows:

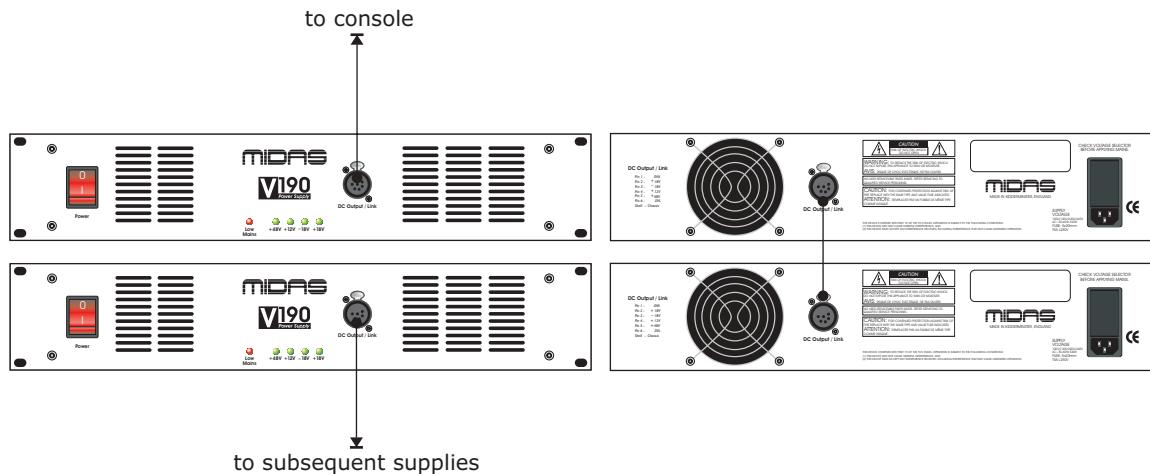
Channels	Internal	External
24 - 32	1	0
40 - 56	2	0
64	2	1

Where multiple supplies are present, these should be switched on at the same time so that excessive load is not applied to any single supply.

The external power supply can be used on 24-56 channel frame sizes to add redundancy or replace the internal supplies. Two external supplies would be required to replace the internal supplies of the 56 channel console and retain redundancy. The external supply has a "daisy chain" facility (as shown below) allowing for a number of power supplies to be used together adding redundancy to the system in the event of a power supply failing.

Connection	6 Pin Male XLR
Pin 1	0V Analogue
Pin 2	+18V Analogue
Pin 3	-18V Analogue
Pin 4	+12V Gooseneck Light
Pin 5	+48V Phantom
Pin 6	0V Gooseneck Light
Case	Chassis

Under NO circumstances should the Venice series power supply be used with the Verona.
Only the MidasV190 Linear External Power Supply is approved for use with Verona consoles.



Servicing and Maintenance

Both the Verona and the Midas V190 linear external power supply both contain potentially lethal voltages and should only be serviced by authorised Midas service agents. In the event of malfunction, please refer servicing to qualified personnel. Contact your Midas dealer for more information.

Technical Specification

Mains inlet	IEC
Mains Voltage Supply	100 - 240V AC Selectable
Mains Voltage Ranges	100VAC = 85-110VAC 120VAC = 102-132VAC 220VAC = 187-242VAC 240VAC = 204-264VAC
Mains Input Current	100VAC = 4.3A (Max) 120VAC = 3.7A (Max) 220VAC = 2.1A (Max) 240VAC = 1.95A (Max)
Input Power	520W (Max)
Output Power	190W (Max)
Output	+18V = 4A (Max) -18V = 4A (Max) +12V = 2A (Max) +48V = 400mA (Max)
Operating Temperature	0-40°C
Dimensions	
Height	2U (86mm / 3.385")
Width	19" Rackmount (482mm / 19")
Depth	350 mm / 13.78"
Weight	13.0kg (28.6lbs)
Connection	6 Pin Male XLR
Pin 1	0V Analogue
Pin 2	+18V Analogue
Pin 3	-18V Analogue
Pin 4	+12V Gooseneck Light
Pin 5	+48V Phantom
Pin 6	0V Gooseneck Light
Case	Chassis